

WHAT IS CLAIMED IS:

1. A vehicle radio receiver comprising:
 - a first mixer circuit operable to generate a receiver signal from first and second signals, the receiver signal characterized by a receiver signal quality; and
 - a second mixer circuit operable to generate a test signal from a different combination of the first and second signals, the test signal characterized by a test signal quality,where the first mixer circuit is operable to reset the combination of the first and second signals for the receiver signal in response to the test signal when the test signal quality exceeds the receiver signal quality.
2. The vehicle radio receiver according to Claim 1,
 - where the second mixer is operable to generate a new test signal in response to a new combination of the first and second signals, the new test signal characterized by a new test signal quality, and
 - where the first mixer circuit is operable to reset the receiver signal in response to the new combination when the new test signal quality exceeds the receiver signal quality.
3. The vehicle radio receiver according to Claim 1, where the first and second RF signals comprise frequency modulation (FM) signals having a frequency in the range of about 88 MHz through about 108 MHz.
4. The vehicle radio receiver according to Claim 3, where the first and second RF signals comprise radio data services (RDS) signals.
5. The vehicle radio receiver according to Claim 1, where the first and second signals comprise at least one of an intermediate frequency (IF) signal and a multiplex (MPX) signal.
6. The vehicle radio receiver according to Claim 1, further comprising:
 - a first tuner operable to generate the first signal from a first radio frequency (RF) signal; and

1004057 123001

a second tuner operable to generate the second signal from a second RF signal,

where the first tuner is configured to receive the first RF signal from a first antenna,

where the second tuner is configured to receive the second RF signal from a second antenna, and

where the first and second antennas are disposed at different positions on the vehicle.

7. The vehicle radio receiver according to Claim 1, where at least one of the receiver signal quality and the test signal quality comprise at least one of a signal strength and a signal noise.

8. The vehicle radio receiver according to Claim 1, further comprising a signal processing circuit connected to the first mixer circuit, the signal processing circuit operable to generate an audio signal in response to the receiver signal.

9. A vehicle radio receiver comprising:
 a first mixer circuit operable to generate a radio frequency (RF) receiver signal characterized by a receiver steering solution, the receiver steering solution representing a proportion of a first RF signal and a second RF signal in the RF receiver signal;
 a second mixer circuit operable to generate an RF test signal characterized by a test steering solution, the test steering solution representing a proportion of the first RF signal and the second RF signal in the RF test signal;
 a first tuner connected to the first mixer circuit, the first tuner operable to generate a receiver signal in response to the RF receiver signal, the receiver signal having a receiver signal quality; and
 a second tuner connected to the second mixer circuit, the second tuner operable to generate a test signal in response to the RF test signal, the test signal having a test signal quality,

10040857 122801

where the first mixer circuit is operable to reset the RF receiver signal in response to the test steering solution, when the test signal quality exceeds the receiver signal quality.

10. The vehicle radio receiver according to Claim 9,
where the second mixer is operable to generate a new RF test signal in response to a new test steering solution,

where the second tuner is operable to generate a new test signal in response to the new RF test signal, the new test signal having a new test signal quality, and

where the first mixer circuit is operable to reset the RF receiver signal in response to the new test steering solution when the new test signal quality exceeds the receiver signal quality.

11. The vehicle radio receiver according to Claim 9, where the first and second RF signals comprise frequency modulation (FM) signals having a frequency in the range of about 88 MHz through about 108 MHz.

12. The vehicle radio receiver according to Claim 9, where the receiver and test signals comprise at least one of an intermediate frequency (IF) signal and a multiplex (MPX) signal.

13. The vehicle radio receiver according to Claim 9, where the first and second RF signals comprise radio data services (RDS) signals.

14. The vehicle radio receiver according to Claim 9,
where the first and second mixers are configured to receive the first RF signal from a first antenna and the second RF signal from a second antenna, and
where the first and second antennas are disposed at different positions on the vehicle.

15. The vehicle radio receiver according to Claim 1, where at least one of the receiver signal quality and the test signal quality comprise at least one of a signal strength and a signal noise.

10040857-122801

16. The vehicle radio receiver according to Claim 9, further comprising a signal processing circuit connected to the first tuner, the signal processing circuit operable to generate an audio signal in response to the receiver signal.

17. A method for beamsteering control in a vehicle radio receiver comprising:

generating a receiver signal in response to a first radio signal and a second radio signal, where the receiver signal has a receiver signal quality;

generating a test signal in response to a first test steering solution, where the first test steering solution represents a proportion of the first and second radio signals in the test signal, where the test signal has a test signal quality; and

resetting the receiver signal in response to the first test steering solution when the test signal quality exceeds the receiver signal quality.

18. The method according to Claim 17, where the first and second radio signals comprise radio frequency (RF) signals.

19. The method according to Claim 18, where the RF signals comprise frequency modulation (FM) signals having a frequency in the range of about 88 MHz through about 108 MHz.

20. The method according to Claim 18, where the RF signals comprise radio data services (RDS) signals.

21. The method according to Claim 17, where the first and second radio signals comprise at least one of an intermediate frequency (IF) signal and a multiplex (MPX) signal.

22. The method according to Claim 17, further comprising:
selecting a second test steering solution;
generating a new test signal in response to the second test steering solution, the new test signal having a new test signal quality; and
resetting the receiver signal in response to the second test steering solution when the new test signal quality exceeds the receiver signal quality.

10040857 122301

23. The method according to Claim 17, further comprising generating an audio signal in response to the receiver signal.

24. A method for beamsteering control in a vehicle radio receiver, comprising:

generating a receiver signal in response to a first radio signal and a second radio signal;

measuring a receiver signal quality of the receiver signal;

generating a first test steering solution in response to the first radio signal;

measuring a first test signal quality of a first test signal responsive to the first test steering solution; and

resetting the receiver signal in response to the first test steering solution when the first test signal quality exceeds the receiver signal quality.

25. The method according to Claim 24, where the first and second radio signals comprise frequency modulated (FM) signals having a frequency in the range of about 88 MHz through about 108 MHz.

26. The method according to Claim 24, where the first and second radio signals comprise at least one of an intermediate frequency (IF) signal and a multiplex (MPX) signal.

27. The method according to Claim 24, where the first and second radio signals comprise radio data services (RDS) signals.

28. The method according to Claim 24, further comprising:

generating a second test steering solution in response to the second radio signal;

measuring a second test signal quality of a second test signal responsive to the second test steering solution; and

resetting the receiver signal in response to the second test steering solution when the second test quality exceeds the receiver signal quality.

10040657-122801

29. The method according to Claim 28, further comprising:
generating a third test steering solution in response to the first and second radio signals;
measuring a third test signal quality of a third test signal responsive to the third test steering solution; and
resetting the receiver signal in response to the third steering solution when the third test quality exceeds the receiver test quality.

30. The method according to Claim 29, further comprising:
generating a new test steering solution in response to the first and second radio signals;
measuring a new test signal quality of a new test signal responsive to the new test steering solution; and
resetting the receiver signal in response to the new steering solution when the new test quality exceeds the receiver test quality.

10040857 122804